

# TEKNODUR 3410 POLYURETHANE SYSTEMS

# K63

	L	M	H
C2	O	O	O
C3	O	O	
C4			
C5	O		

5 9.2.2012

Coating systems for steel surfaces that will be exposed to atmospheric corrosion. The systems consist of chemically curing, solvent-borne two pack epoxy and polyurethane reactive paints. The primer used on steel is TEKNOZINC 80 SE Zinc Rich Epoxy Paint, which protects the steel cathodically like zincing. TEKNODUR 3410 weather-resistant polyurethane paint can be used for the top coat.

Teknos Coating System Symbol	K63a	K63b	K63c	K63d	K63e
EN ISO 12944-5 (2007) symbol / corrosivity category/ durability range	A3.11/C3/H A4.13/C4/L	A4.14/C4/M	A4.15/C4/H A5I.04/C5-I/M A5M.05/C5-M/M	-	A5I.05/C5-I/H A5M.06/C5-M/H
EN ISO 12944-5 (1998) symbol / corrosivity category/ durability range	S3.21/C3/H S4.19/C4/L S6.05/C5-I/M	S3.22/C3/H S4.20/C4/M	S4.21/C4/H S6.06/C5-I/H S7.07/C5-M/M	S4.22/C4/H	S4.23/C4/H S7.09/C5-M/H
The coating system structure:	EPZn(R)EP PUR160/3- FeSa 2½	EPZn(R)EP PUR200/3- FeSa 2½	EPZn(R)EP PUR240/3- FeSa 2½	EPZn(R)EP PUR280/4- FeSa 2½	EPZn(R)EP PUR320/4- FeSa 2½
TEKNOZINC 80 SE Zinc Rich Epoxy Paint	1 x 40 µm	1 x 40 µm	1 x 40 µm	1 x 40 µm	1 x 40 µm
TEKNOPLAST PRIMER 7 Epoxy Primer	1 x 80 µm	1 x 100 µm	1 x 120 µm	2 x 90 µm	2 x 110 µm
TEKNODUR 3410 Polyurethane Top Coat	1 x 40 µm	1 x 60 µm	1 x 80 µm	1 x 60 µm	1 x 60 µm
Total film thickness	160 µm	200 µm	240 µm	280 µm	320 µm
Coating system VOC, g/m <sup>2</sup> with TEKNODUR 3410-09 Top Coat	90	110	130	150	160

Example of the coating system's marking: K63a - EN ISO 12944-5/ A3.11(EPZn(R)EPPUR160/3-FeSa 2½).

**USAGE** Structural steel exposed to atmospheric corrosion, whenever good gloss and colour retention is essential.

Teknos symbol	Typical use
K63a	Protection for steel surfaces in corrosivity categories C3 and C4.
K63b	Protection for steel surfaces in corrosivity categories C3 and C4.
K63c	Protection for steel surfaces outdoors in corrosivity categories C4 and C5.
K63d	Protection for steel surfaces in corrosivity category C4.
K63e	Protection for steel surfaces outdoors in extremely strenuous conditions in corrosivity categories C4 and C5.

**Surface preparation** Remove from the surfaces any contaminants that might be detrimental to surface preparation and painting. Remove also water-soluble salts by using appropriate methods. The surfaces are prepared according to the different materials as follows:

**Steel Surfaces:** Remove mill scale and rust by blast cleaning to preparation grade Sa 2½ (standard ISO 8501-1).

The place and time of the preparation are to be chosen so that the prepared surface will not get dirty or damp before the subsequent treatment.

Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.

### Prefabrication Primer

The coating systems are compatible with KORRO SE Zinc Epoxy Prefabrication Primer and KORRO SS Zinc Silicate Prefabrication Primer.

**Application** Stir the components of the paints thoroughly before use. Mix base and hardener with each other in the proportions given on the paint labels and stir the mixture thoroughly. Mix only an amount sufficient to be used within the pot life of the mixture.

The temperature of the air and the surface as well as the relative air humidity during the application and drying period must conform to the figures given in the table. Higher temperatures speed up the drying process. The surface must be dry and free from dust.

The technical data of the paints are given in the table below and in the data sheets of the products.

**Maintenance** **Touch-up:** Surfaces with rust grades Ri 1 to Ri 3 can be repaired by touching up. Remove flaking paint and rust from damaged areas by scraping and blast-cleaning. Extend the preparation over the edges of damaged parts into the intact coating. If required, feather the edges of prepared areas. Touch up the prepared patches with the paints of the system to the original film thickness.

**NOTE!** TEKNOZINC 80 SE is to be applied to bare steel only, not over an old paint coat.

**Complete renewal:** Surfaces with rust grade Ri 4 are to be repainted completely, as the coating has lost its protective power. Blast-clean the whole surface to grade Sa 2½ and paint from priming to top coat as for new work.

### Technical Data

Paint	TEKNOZINC 80 SE	TEKNOPLAST PRIMER 7	TEKNODUR 3410
Data Sheet no.	940	956	993
Paint Type	zinc rich epoxy paint	epoxy primer	polyurethane top coat
Colours	bluish grey	grey, red and white	by agreement
Finish	matt	semi-matt	TEKNODUR 3410-05: semi-gloss TEKNODUR 3410-09: gloss
Thinner	TEKNOSOLV 9506	TEKNOSOLV 9506, TEKNOSOLV 9530	TEKNOSOLV 9526
Methods of application	airless spray	airless spray	airless spray
Airless spray nozzle	0.018 - 0.021" (turn-nozzle)	0.013 - 0.019"	0.013 - 0.015
Application conditions			
- min. temperature °C	+10	+10	+5
- max. relative humidity %	80	80	80
Safety markings	See Material Safety Data Sheet	See Material Safety Data Sheet	See Material Safety Data Sheet
Volume solids %	50 ±2	70 ±2 (ISO 3233:1988)	TEKNODUR 3410-05: 63 ±2 TEKNODUR 3410-09: 60 ±2
Total mass of solids g/l	abt. 1900	abt. 1200	TEKNODUR 3410-05: abt. 980 TEKNODUR 3410-09: abt. 930
Volatile organic compound (VOC) g/l	abt. 450	abt. 300	TEKNODUR 3410-05: abt. 330 TEKNODUR 3410-09: abt. 350
Recommended film thickness			TEKNODUR 3410-09
- wet µm	80	114 - 171	67 - 167
- dry µm	40	80 - 120	40 - 100
Theoretical spreading rate m <sup>2</sup> /l	12.5	8.8 - 5.8	16.1 - 6.0
Drying time at +23 °C / 50% RH	(dry film 40 µm)	(dry film 80 µm)	(dry film 40 µm)
- dust free, (ISO 9117-3:2010)	after 5 min	after 1 h	after 40 min.
- touch dry, (DIN 53150:1995)	after 30 min	after 4 h	after 6 h
- fully cured	-	-	after 7 d
Overcoatable, 50% RH	by itself or with TEKNOPLAST PRIMER 7:	by itself:	by itself:
	min.	max.*	min.
	max.*	min.	max.*
+5°C	-	-	after 20 h
+10°C	after 6 h	after 3 months	after 8 h
+23°C	after 1 h	after 3 months	after 6 months
	after 12 h	after 7 d	after 12 h
+10°C	after 4 h	after 3 d	-
+23°C			

\* Maximum overcoating interval without roughening.